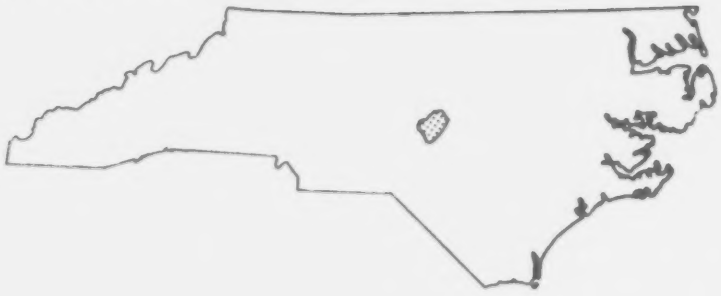
FEM 1.209:370143, 370331

FLOOD INSURANCE STUDY

LEE COUNTY, NORTH CAROLINA AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CITY OF SANFORD	370143
UNINCORPORATED AREAS	370331



SEPTEMBER 6, 1989

Federal Emergency Management Agency

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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Persimmon Creek	Panel 10P
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Skunk Creek	Panel 12P
Gasters Creek	Panels 13P-15P
Kendale Creek	Panel 16P
Carrs Creek	Panels 17P-18P
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FLOOD INSURANCE STUDY

LEE COUNTY, NORTH CAROLINA AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the geographic area of Lee County, North Carolina, including the City of Sanford and the Unincorporated Areas of Lee County (hereinafter referred to collectively as Lee County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgments

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this study were performed by Wang Engineering Company, Inc. (the Study Contractor) for the Federal Emergency Management Agency (FEMA), under Contract No. EMA-86-C-0110. This study was completed in June 1987.

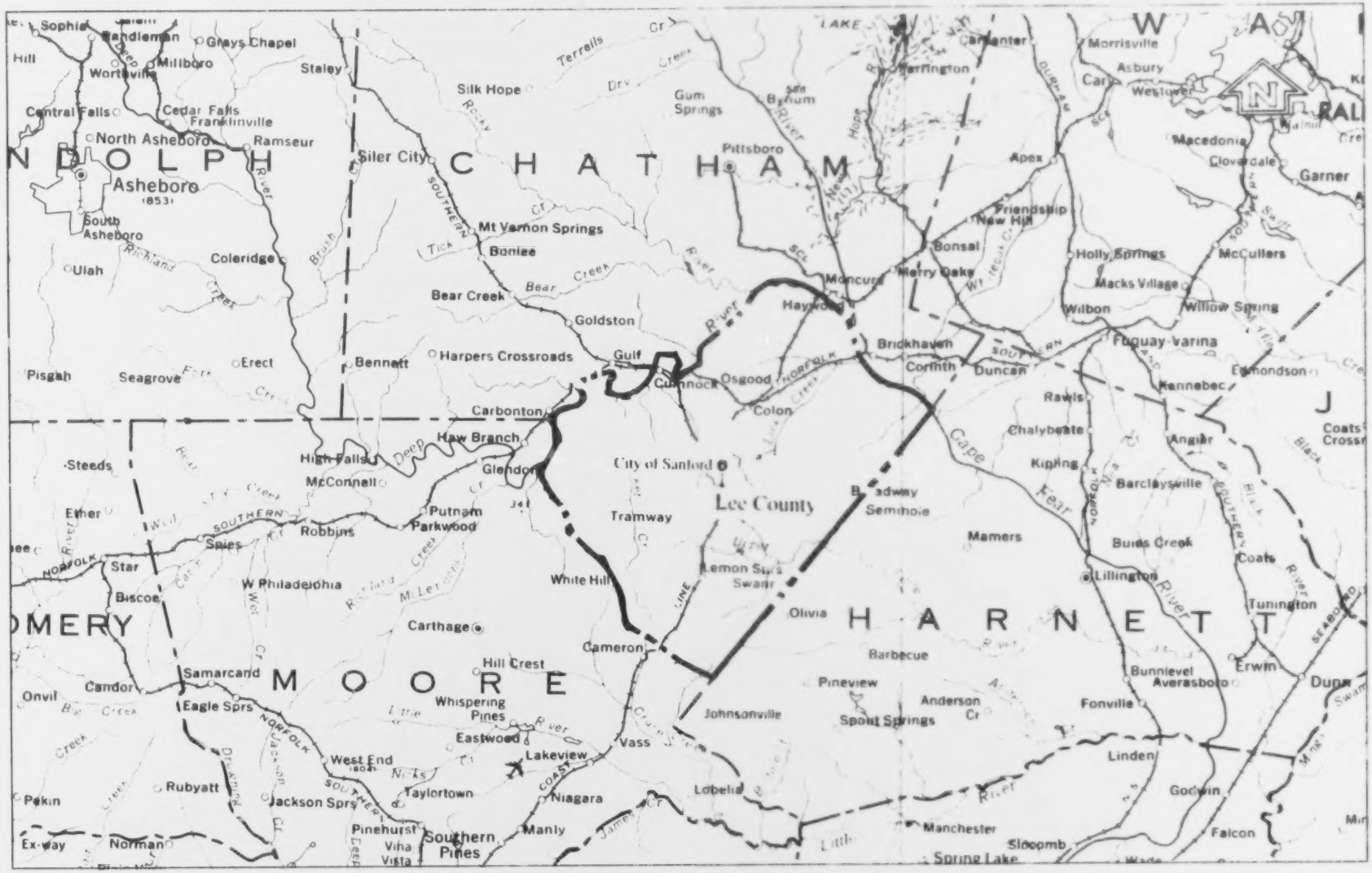
1.3 Coordination

On October 18, 1988, the results of this Flood Insurance Study were reviewed and accepted at a final coordination meeting attended by representatives of the Study Contractor, FEMA, and the community.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the geographic area of Lee County, North Carolina. The area of study is shown on the Vicinity Map (Figure 1).


Lee County
City of Sanford
Asheboro
Siler City
Pittsburg
Apex
Cary
Morrisville
Asbury
Westlower
Macedonia
Cloverdale
Garner
Friendship
New Hill
Bonsal
Holly Springs
McCullers
Macks Village
Willow Spring
Wilbon
Fuquay-Varina
Kennebec
Edmondson
Coats
Crossr
Rawls
Chalybeate
Angier
Kipling
Barclaysville
Broadway
Seminole
Mamers
Burns Creek
Coats
Lillington
Tunnington
Erwin
Dunn
Bunnlevel
Averasboro
Fonville
Linden
Godwin
Falcon
Slocomb
Spring Lake
Manchester
Lobelia
Johnsonville
Spout Springs
Anderson Cr
Pineview
Barbecue
Olivia
Cameron
Vass
Lakeview
Eastwood
Whispering Pines
Hill Crest
Carthage
White Hill
Lemon Spgs
Swann
Tramway
Putnam
Parkwood
Robbins
Spies
W Philadelphia
Biscoe
Star
Ether
Steeds
High Falls
McConnell
Glendon
Haw Branch
Carbonton
Colon
Cumnock
Osgood
Gulf
Harpers Crossroads
Bennett
Erect
Seagrove
Pisgah
Ulah
Coleridge
South Asheboro
Bonlee
Mt Vernon Springs
Bear Creek
Goldston
Haywood
Moncure
Merry Oaks
Brickhaven
Corinth
Duncan
Gum Springs
Silk Hope
Staley
Millboro
Wortsville
Sophia
Sandleman
Grays Chapel
Hill
Central Falls
Cedar Falls
Franklinville
North Asheboro
Ramseur
Carrington
Carpenter
Lake
Terrells Cr
Dry Creek
Rocky River
Deep River
Cape Fear River
Haw River
Richland Creek
Tick Creek
Bear Creek
Brush Creek
Deep River
Cape Fear River
Little River
Black River
Juniper Creek
Buckhorn Creek
Lick Creek
Swift Creek
Big Creek
Eagle Spgs
Onvil
Candor
Samarcand
Pekin
Rubyatt
Jackson Spgs
Taylortown
West End
Niagara
Manly
Pinehurst
Vina Vista
Southern Pines
Ex-way
Norman
Jackson Creek
Drowning Creek
Little River
Juniper Creek
Lees Mill
Nicks Creek
Big Creek
Richland Creek
McLendons Cr
Cabin Creek
Lick Creek
Buckhorn Creek
Swift Creek
Big Creek
Little River
Black

Flooding caused by overflow of Big Buffalo Creek, Little Buffalo Creek, Persimmon Creek, Persimmon Creek Tributary, Sloan Creek, Gasters Creek, Kendale Creek, Carrs Creek, Pocket Creek, and Little Crane Creek was studied in detail.

Approximate analyses were used to study those areas having low development potential or minimal flood hazards.

The areas studied were selected with priority given to all known flood hazard areas and areas of projected development or proposed construction through July 1992. The scope and methods of study were proposed to and agreed upon by FEMA and Lee County.

2.2 Community Description

Lee County is in central North Carolina, and is bordered by the Deep River, the Cape Fear River, and Chatham County on the north; Moore County on the west; and Harnett County on the southeast. The City of Sanford, the county seat, is 44 miles southwest of the State capital at Raleigh. Lee County is served by U.S. Routes 1, 15, 501, and 421, the CSX railroad, and the Norfolk Southern Railway. There is a municipal airport at the City of Sanford. The 1980 population of Lee County was reported to be 36,718 (Reference 1).

2.3 Principal Flood Problems

Major floods have occurred in the county during all seasons of the year, but the most intense rainfall occurs between June and September. Because of the relatively small size of the streams, flood stages are reached only a few hours after intense rainfall begins. Floodwater usually remains out of the streambanks less than 20 hours.

2.4 Flood Protection Measures

Flood protection measures are not known to exist within the study area.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that is expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period,

the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each riverine flooding source studied in detail affecting the community.

The discharge-frequency relationship was developed and adjusted for urbanization using U.S. Geological Survey (USGS) techniques (Reference 2). Land use for the watersheds was determined from topographic maps (Reference 3) and by field inspection. The percentages of impervious area and area served by storm drainage were determined from land use in the watersheds according to USGS methods (Reference 4). The discharge-frequency simulation data for the study streams was obtained from a report titled "Hydrologic Information Storage and Retrieval System" (Reference 5).

Peak discharge-drainage area relationships for the 100-year floods of each flooding source studied in detail in the community are shown in Table 1.

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ MILES)	PEAK DISCHARGE (CFS) 100-YEAR
LITTLE BUFFALO CREEK		
at U.S. Route 1	5.81	2,927
at Amos Bridges Road	5.56	2,910
1.3 miles upstream of Amos Bridges Road	4.52	2,779
at downstream crossing of CSX railroad	3.28	2,690
at Chisholm Street	2.59	2,398
at Charlotte Avenue	2.36	2,398
at Hickory Avenue	2.26	2,398
at Third Street	2.01	2,388
BIG BUFFALO CREEK		
1.2 miles downstream of Norfolk Southern Railway	17.62	4,805
at McNeill Road	12.65	4,329
at upstream crossing of Norfolk Southern Railway	10.84	4,100
at Spring Lane	9.75	4,087
at Carbonton Road	8.08	3,617

TABLE 1 - SUMMARY OF DISCHARGES (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ MILES)	PEAK DISCHARGE (CFS) 100-YEAR
PERSIMMON CREEK		
at Wicker Street	4.55	2,670
at Buffalo Church Road	4.20	2,670
500 feet upstream of confluence of Persimmon Creek Tributary	2.63	1,886
at Keller Andrews Road	2.22	1,817
at Carthage Street	1.76	1,734
2,300 feet upstream of Carthage Street	1.57	1,734
PERSIMMON CREEK TRIBUTARY		
at Westover Drive	1.52	1,647
3,440 feet upstream of Westover Drive	1.14	1,519
SKUNK CREEK		
950 feet downstream of Wicker Street	2.76	1,946
at Wicker Street	2.59	1,894
at Carthage Street	2.32	1,885
at Garden Street Extension	1.31	1,329
GASTERS CREEK		
400 feet upstream of mouth	5.50	2,734
at Lee Avenue	3.41	2,403
2,800 feet upstream of confluence of Kendale Creek	1.81	2,061
KENDALE CREEK		
900 feet upstream of mouth	0.99	1,287
at Hiawatha Trail	0.76	1,259
CARRS CREEK		
1.9 miles downstream of Cox Maddox Road	4.33	2,180
at Cox Maddox Road	1.68	1,600
750 feet upstream of Cox Maddox Road	1.55	1,526
LITTLE CRANE CREEK		
at county boundary	2.23	1,543
at Cedar Lane Road	0.26	424

TABLE 1 - SUMMARY OF DISCHARGES (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ MILES)	PEAK DISCHARGE (CFS) 100-YEAR
POCKET CREEK		
1.8 miles downstream of Steel Bridge Road	16.45	4,167
at Steel Bridge Road	15.08	3,942
2,400 feet upstream of Steel Bridge Road	14.71	3,880

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Cross-section data for the streams studied were obtained from field surveys or taken from a U.S. Army Corps of Engineers study (Reference 6). All bridges were either surveyed or modeled from previous study data.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles and on the Flood Insurance Rate Map.

Roughness coefficients (Manning's "n") used in the hydraulic computations were estimated by engineering judgment and based on field observation of channel and overbank areas. Roughness values for the channels varied from 0.040 for the large, open streams to 0.115 for the narrow streams with brushy growth. Roughness values for the overbanks varied from 0.090 for areas with dense stands of bushy willows to 0.130 for heavily wooded areas.

Water-surface profile elevations for the 100-year flood were computed using the HEC-2 step-backwater computer program (Reference 7). The starting water-surface elevations for the streams studied were determined using the slope-area method.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals.

The hydraulic analyses for this study are based on the effects of unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). Elevation reference marks used in this study are shown on the map and described in the exhibit labeled Elevation Reference Marks.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages State and local governments to adopt sound floodplain management programs. Therefore, each Flood Insurance Study provides 100-year flood elevations and delineations of the 100- and 500-year floodplain boundaries and 100-year floodway to assist communities in developing floodplain management measures.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the 100- and 500-year floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:4800 with a contour interval of 2 feet (Reference 8).

The 100-year floodplain boundaries are shown on the Flood Insurance Rate Map. On this map, the 100-year floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE, AH, AO, A99, V, and VE). Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

4.2 Floodways

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights.

Floodways have not been shown or computed for this community. Along streams where floodways have not been computed, the community must ensure that the cumulative effect of development in the floodplain will not cause more than a 1.0-foot increase in the base flood elevations at any point within the community.

5.0 INSURANCE APPLICATION

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by detailed methods. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 100-year floodplain, areas of 100-year flooding where average depths are less than 1 foot, areas of 100-year flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 100-year floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols the 100- and 500-year floodplains, the floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The current Flood Insurance Rate Map presents flooding information for the geographic area of Lee County. Previously, separate Flood Hazard Boundary Maps were prepared for each flood-prone incorporated community and the unincorporated areas of the county. Historical data relating to the maps prepared for each community are presented in Table 2, Community Map History.

7.0 OTHER STUDIES

Flood Insurance Studies in progress for Moore County and Harnett County, North Carolina (References 9 and 10), are in agreement with this study.

This Flood Insurance Study supersedes the previously printed Flood Hazard Boundary Maps for Lee County and the City of Sanford, North Carolina (References 11 and 12).

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, FEMA, 1371 Peachtree Street, NE., Suite 736, Atlanta, Georgia 30309.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
CITY OF SANFORD	APRIL 15, 1977		SEPTEMBER 6, 1989	
UNINCORPORATED AREAS	JUNE 30, 1978		SEPTEMBER 6, 1989	

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

9.0 REFERENCES AND BIBLIOGRAPHY

1. U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population, Number of Inhabitants, North Carolina, Washington, D.C., February 1982.

2. U.S. Department of the Interior, Geological Survey, Water Resources Investigations Report 76-17, Techniques for Estimating the Magnitude and Frequency of Floods on Natural Streams in North Carolina, N.M. Jackson, Jr., 1976.

3. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 Feet: Sanford, North Carolina, 1974; Broadway, North Carolina, in progress.

4. U.S. Department of the Interior, Geological Survey, Effect of Urban Development of Floods in the Piedmont Province of North Carolina, A.L. Putnam, 1972.

5. North Carolina Agricultural Experiment Station, Hydrological Information Storage and Retrieval System, E.H. Wiser, 1975.

6. U.S. Army Corps of Engineers, Wilmington District, Flood Plain Information for the City of Sanford, North Carolina, 1973.

7. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water Surface Profiles, Computer Program 723-X6-L202A, Davis, California, April 1984.

8. City of Sanford, North Carolina, Planning Department, Topographic Maps, Sanford, North Carolina, and Vicinity, Scale 1:4800, Contour Interval 2 Feet: Sanford, North Carolina, 1977.

9. Federal Emergency Management Agency, Flood Insurance Study, Moore County, Unincorporated Areas, North Carolina, in progress.

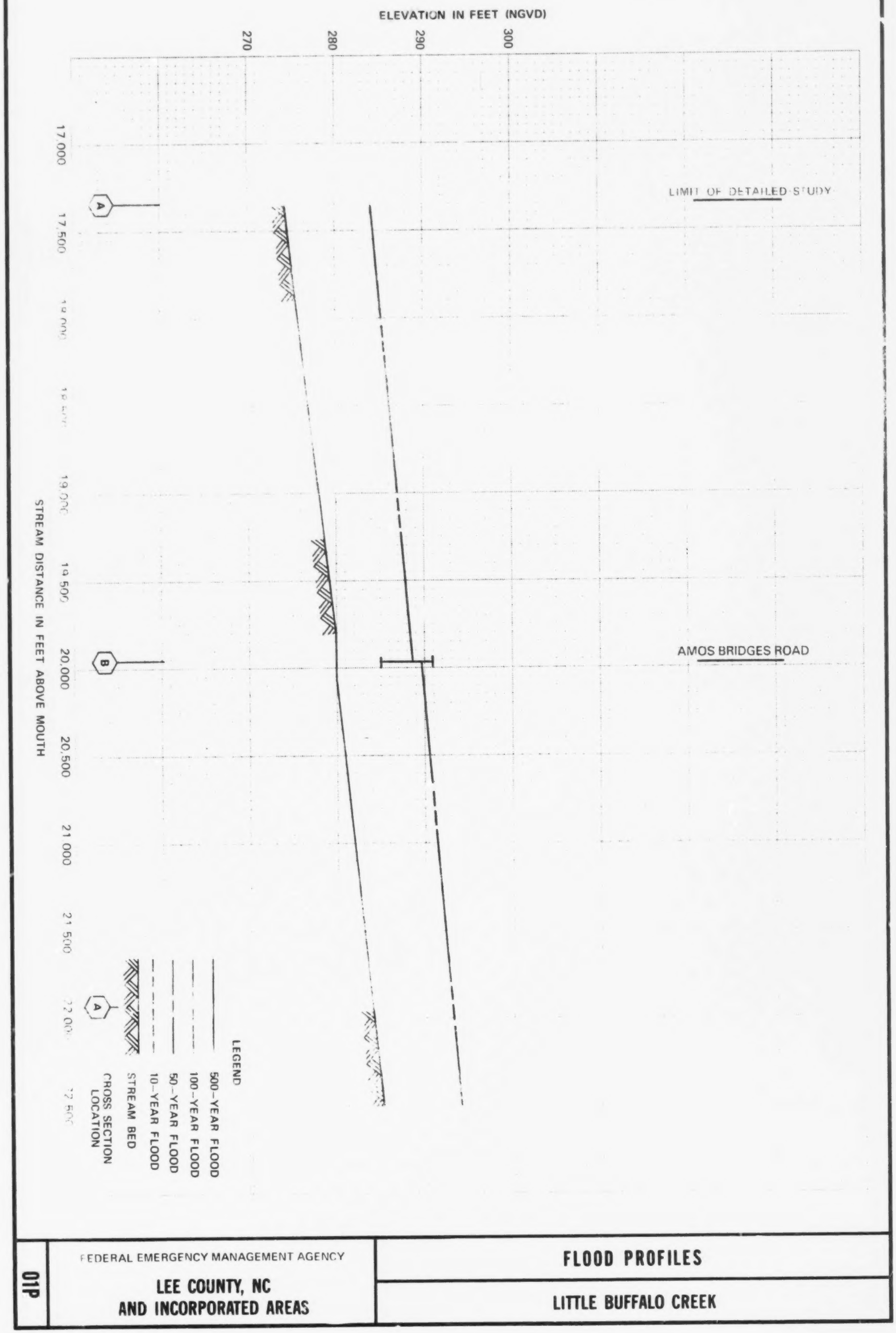
10. ————, Flood Insurance Study, Harnett County, Unincorporated Areas, North Carolina, in progress.

11. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Hazard Boundary Map, Lee County, Unincorporated Areas, North Carolina, June 1978.

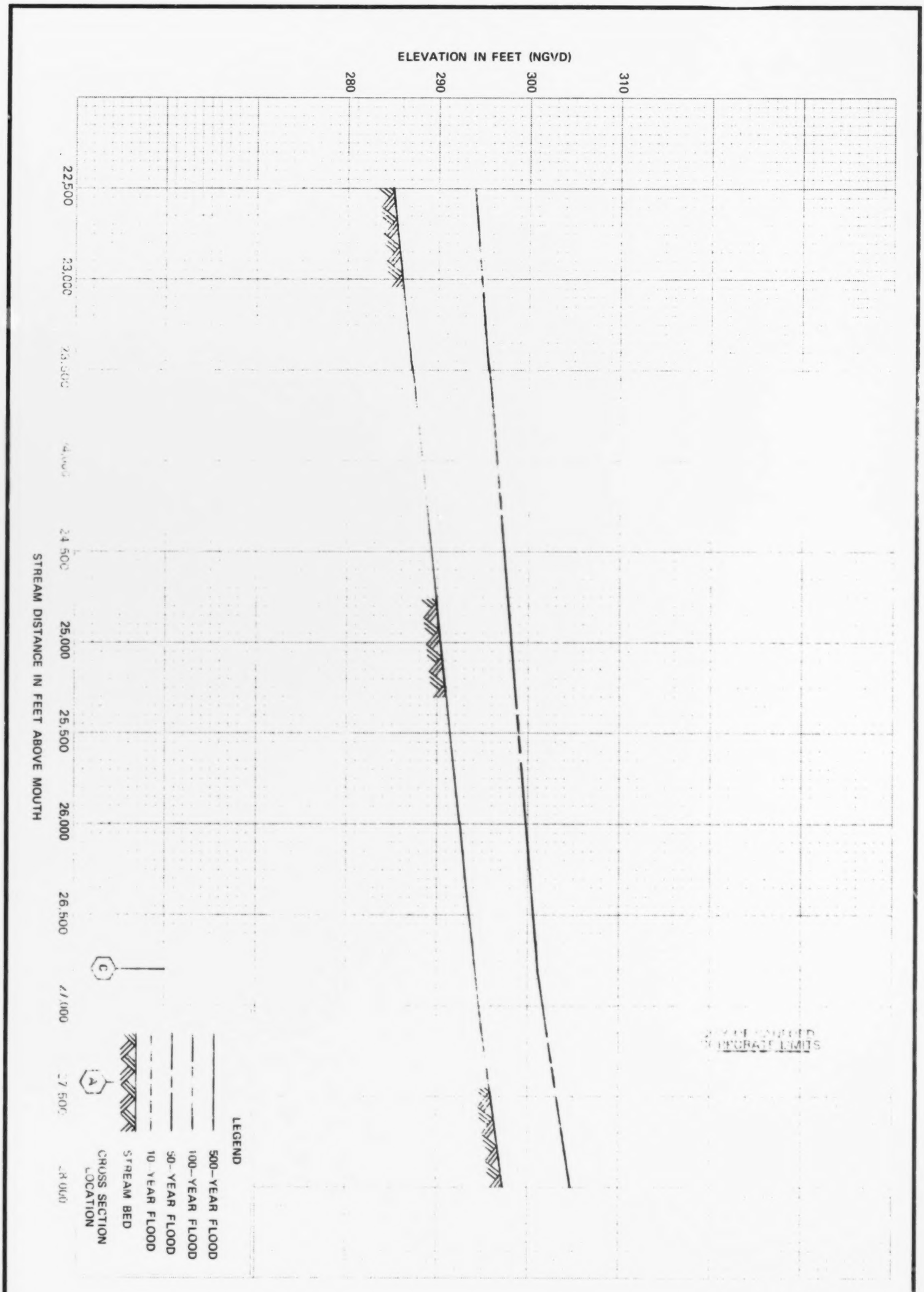
12. ————, Federal Insurance Administration, Flood Hazard Boundary Map, City of Sanford, Lee County, North Carolina, April 1977.

ELEVATION REFERENCE MARKS

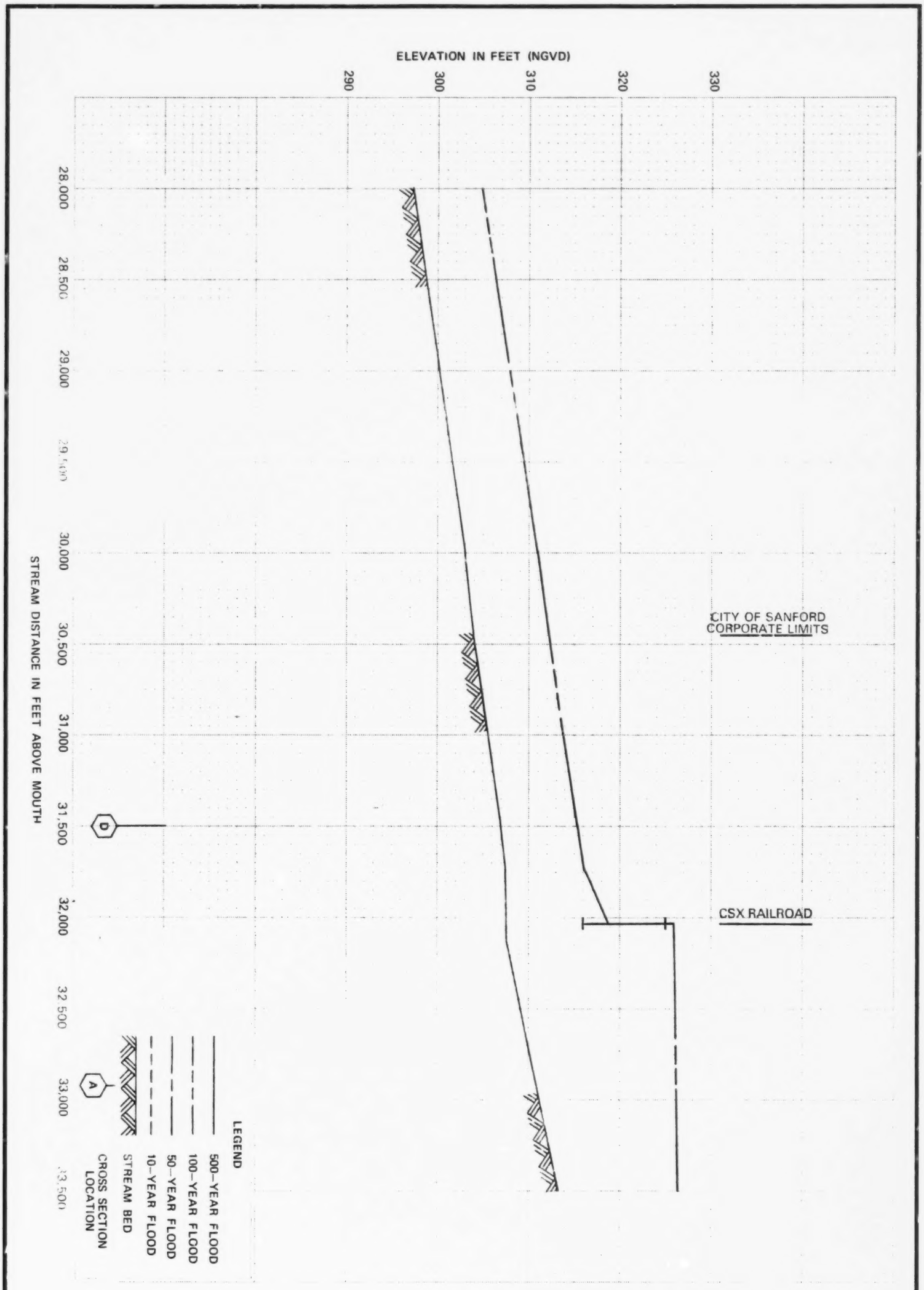
REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
1	0060	287.87	steel knob on top of rod 4 inches below standard National Geodetic Survey logo flange located about 200 feet southwest of Amos Bridges Road bridge over Little Buffalo Creek, 159.2 feet south of centerline of Amos Bridges Road, 1.8 feet northwest of corner fence post, 5.1 feet northeast of east gate post
2	0070	379.70	disk set in top of concrete post flush with ground located about 0.8 mile north along U.S. Route 15 from intersection of State Road 78, about 22.8 feet east of centerline of northbound U.S. Route 15
3	0070	468.00	North Carolina Geodetic Survey brass disk stamped "CHOPLIN 1970" set in top of concrete cylinder flush with ground, located 17.3 feet southeast of centerline of SR 1332, about 150 feet southwest along SR 1332 from intersection of SR 1334, and
4	0090	437.4	steel knob on top of rod 4 inches below National Geodetic Survey logo flange located at intersection of U.S. Route 421 and State Road 87 in southernmost traffic island, 31.8 feet northeast of curb of southbound State Road 87, about 22 feet southwest of curb of northbound State Road 87
5	0125	398.0	brass disk stamped "GLEE 1970" set in top of concrete cylinder flush with ground, located 56.0 feet southeast of centerline of U.S. Route 1, about 0.55 mile along U.S. Route 1 southwest of intersection of SR 1173



01P	FEDERAL EMERGENCY MANAGEMENT AGENCY **LEE COUNTY, NC AND INCORPORATED AREAS**	**FLOOD PROFILES** **LITTLE BUFFALO CREEK**



02P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES LITTLE BUFFALO CREEK



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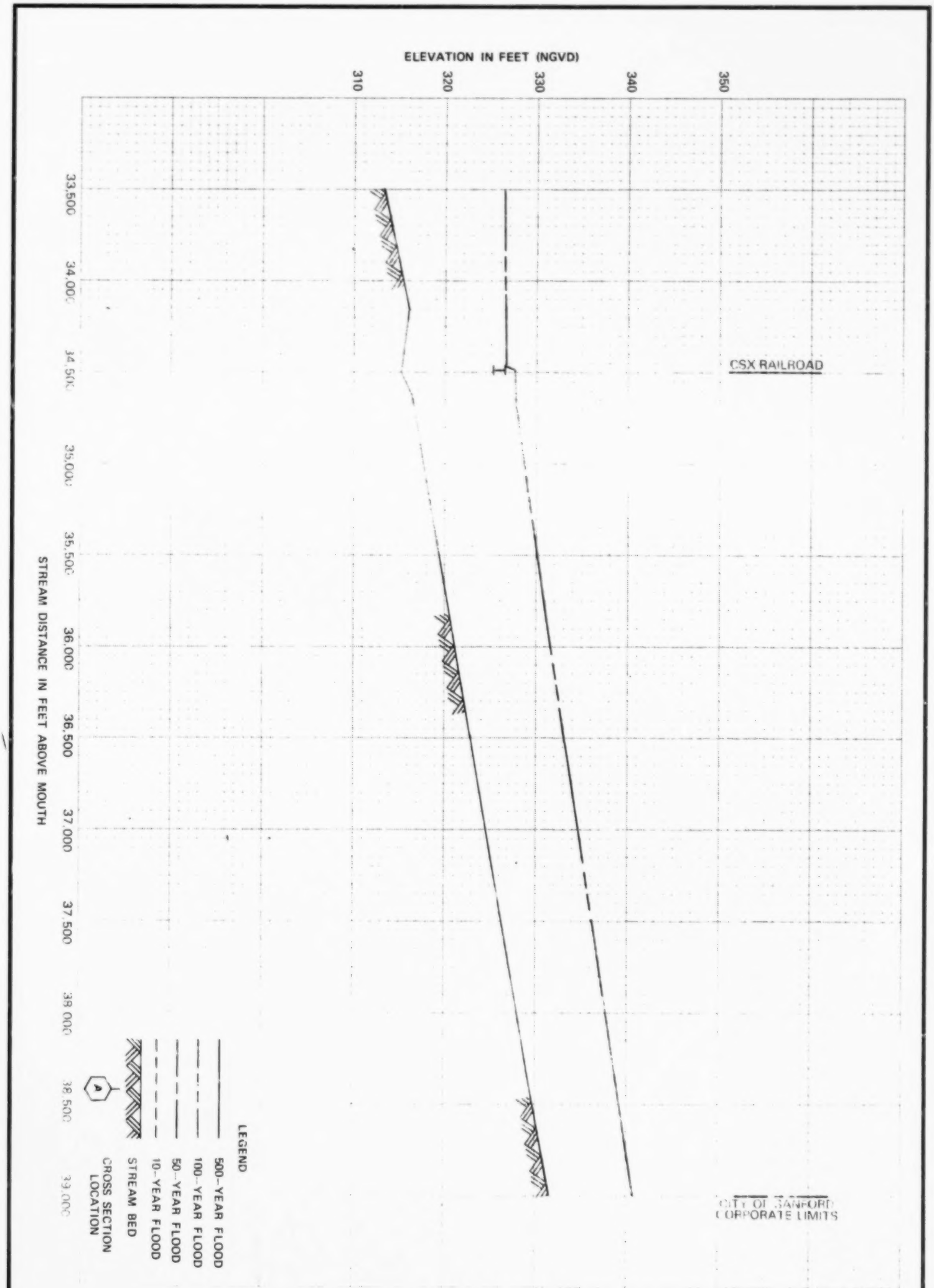
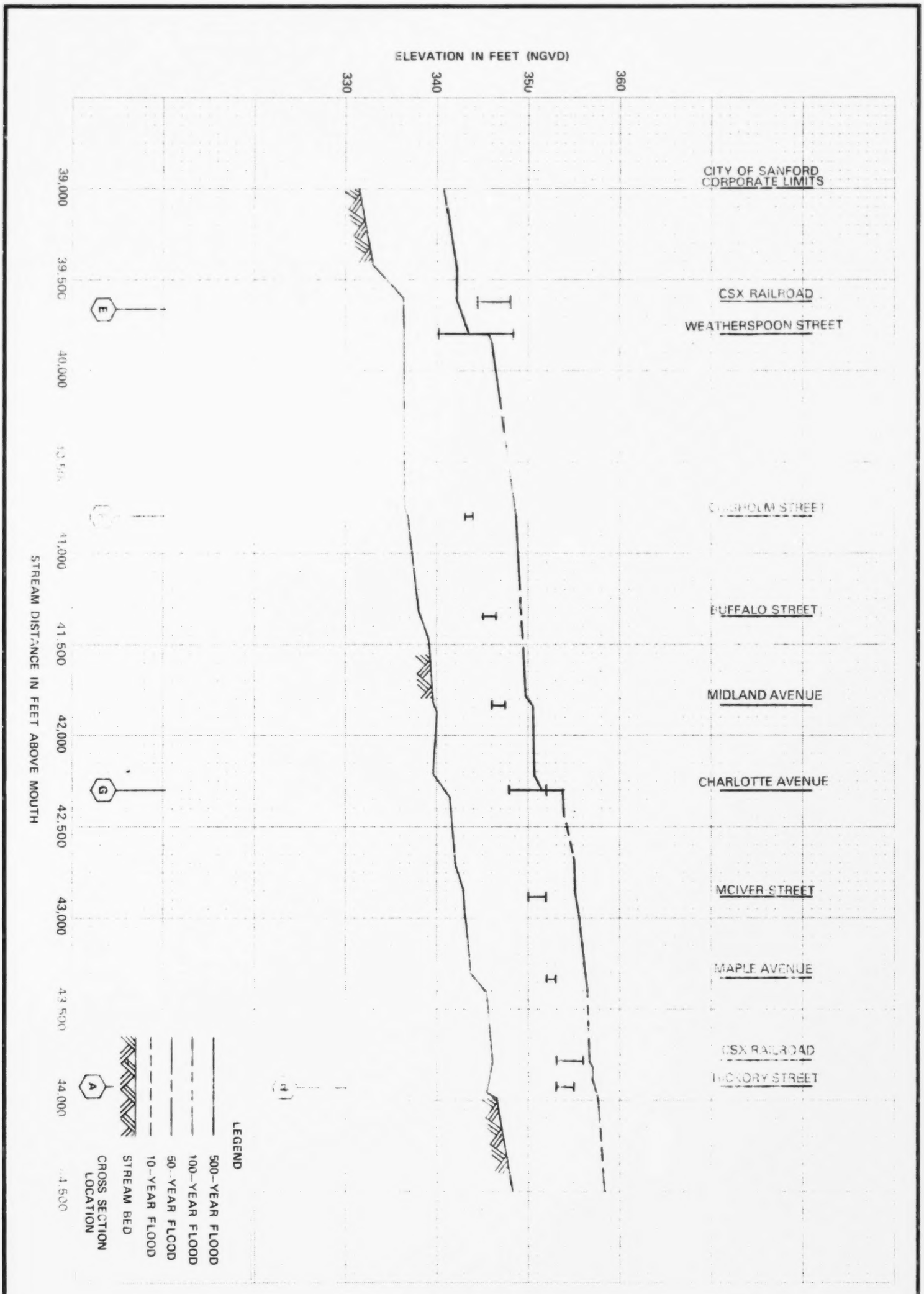
03P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES LITTLE BUFFALO CREEK



04P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES LITTLE BUFFALO CREEK



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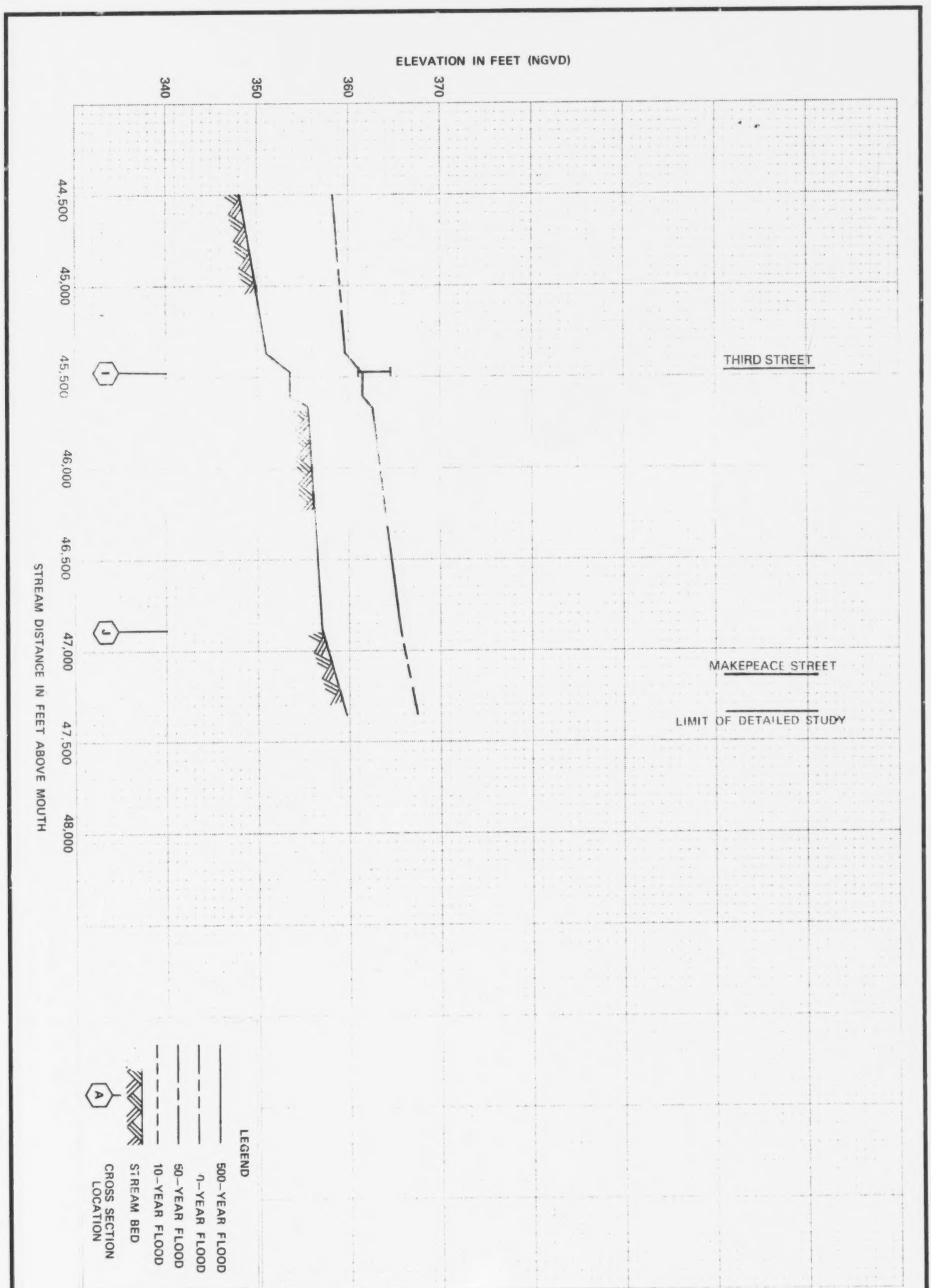
05P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES LITTLE BUFFALO CREEK



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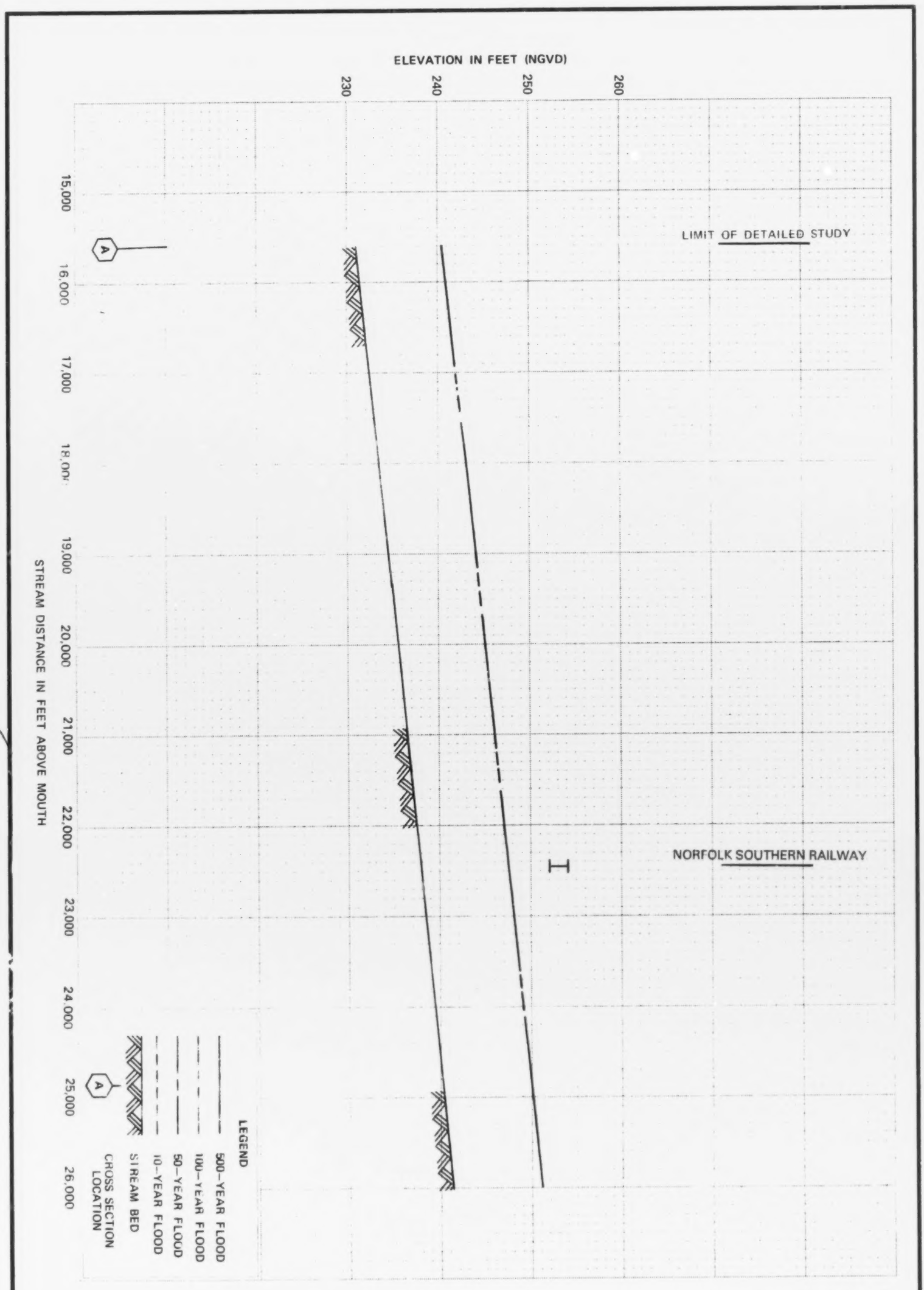
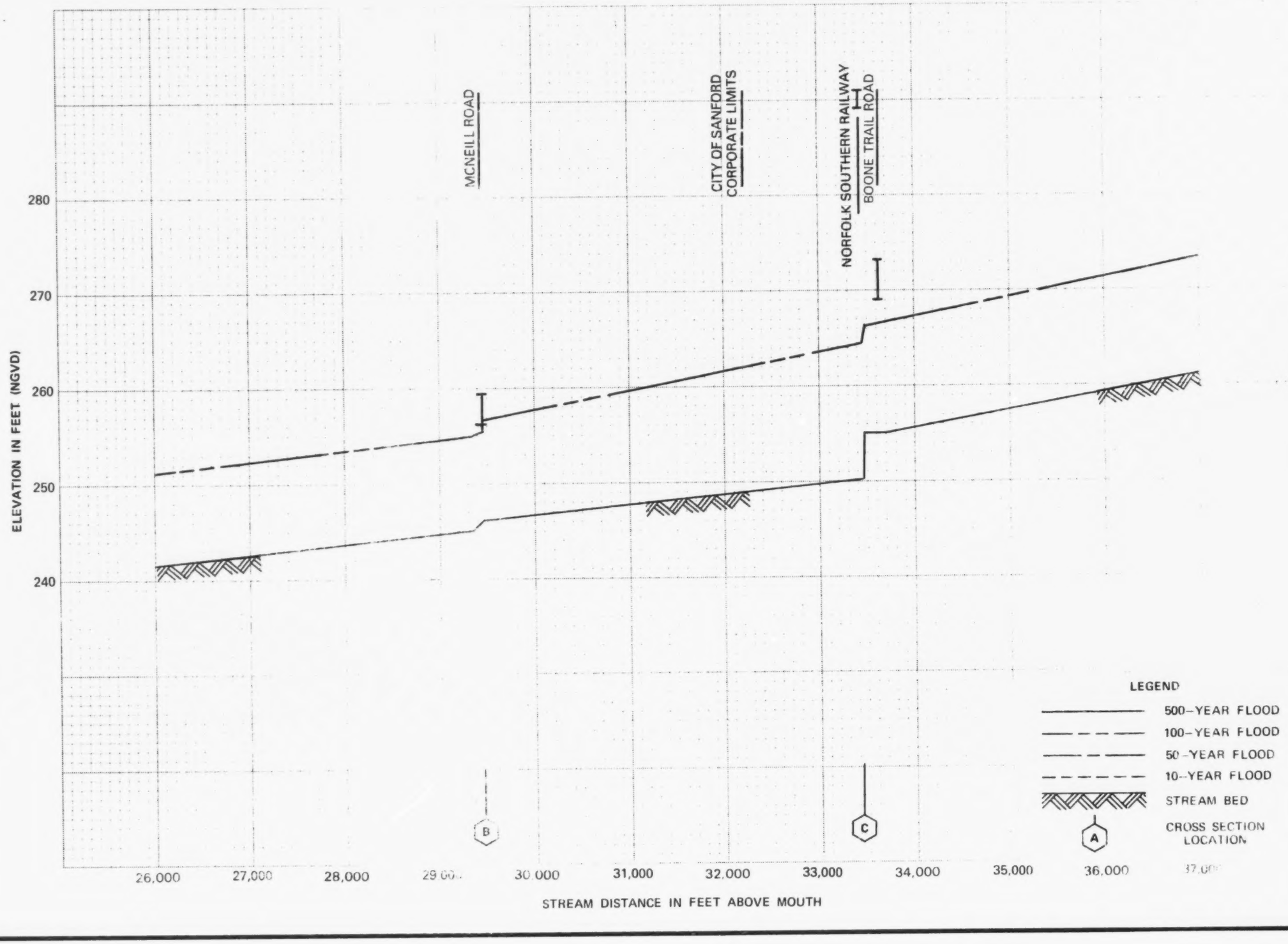
06P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES LITTLE BUFFALO CREEK



07P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES BIG BUFFALO CREEK



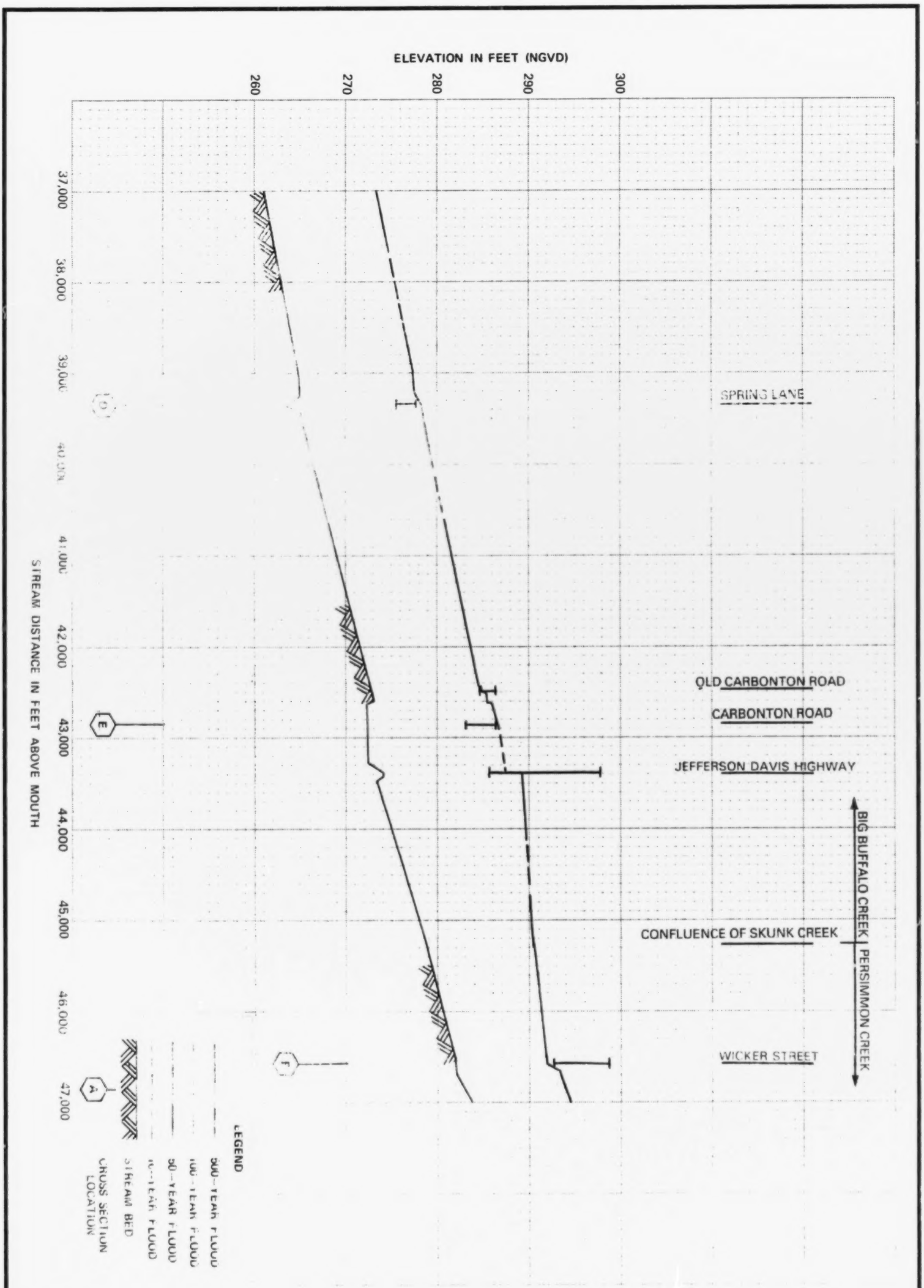
FLOOD PROFILES

BIG BUFFALO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

08P



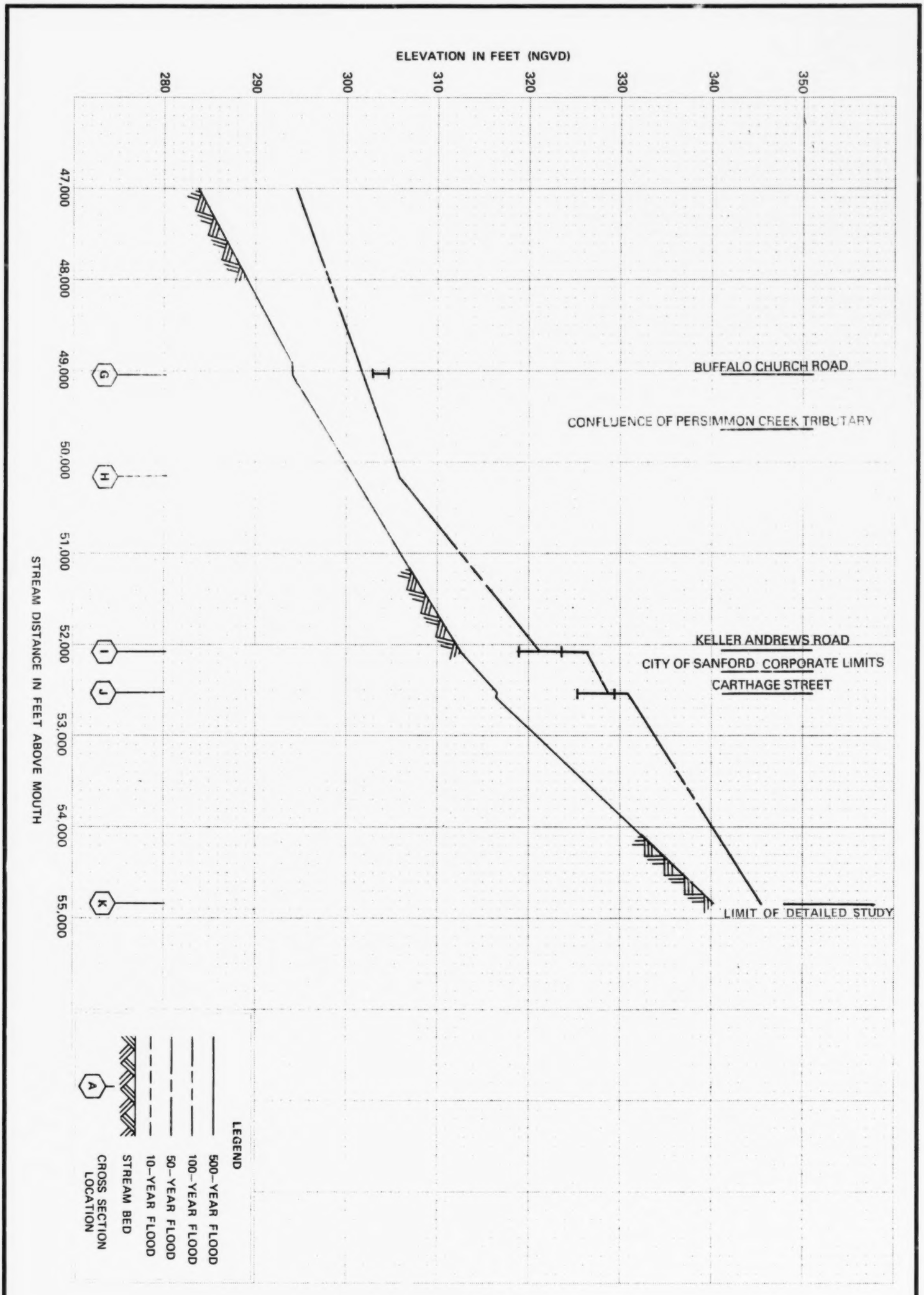
09P

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

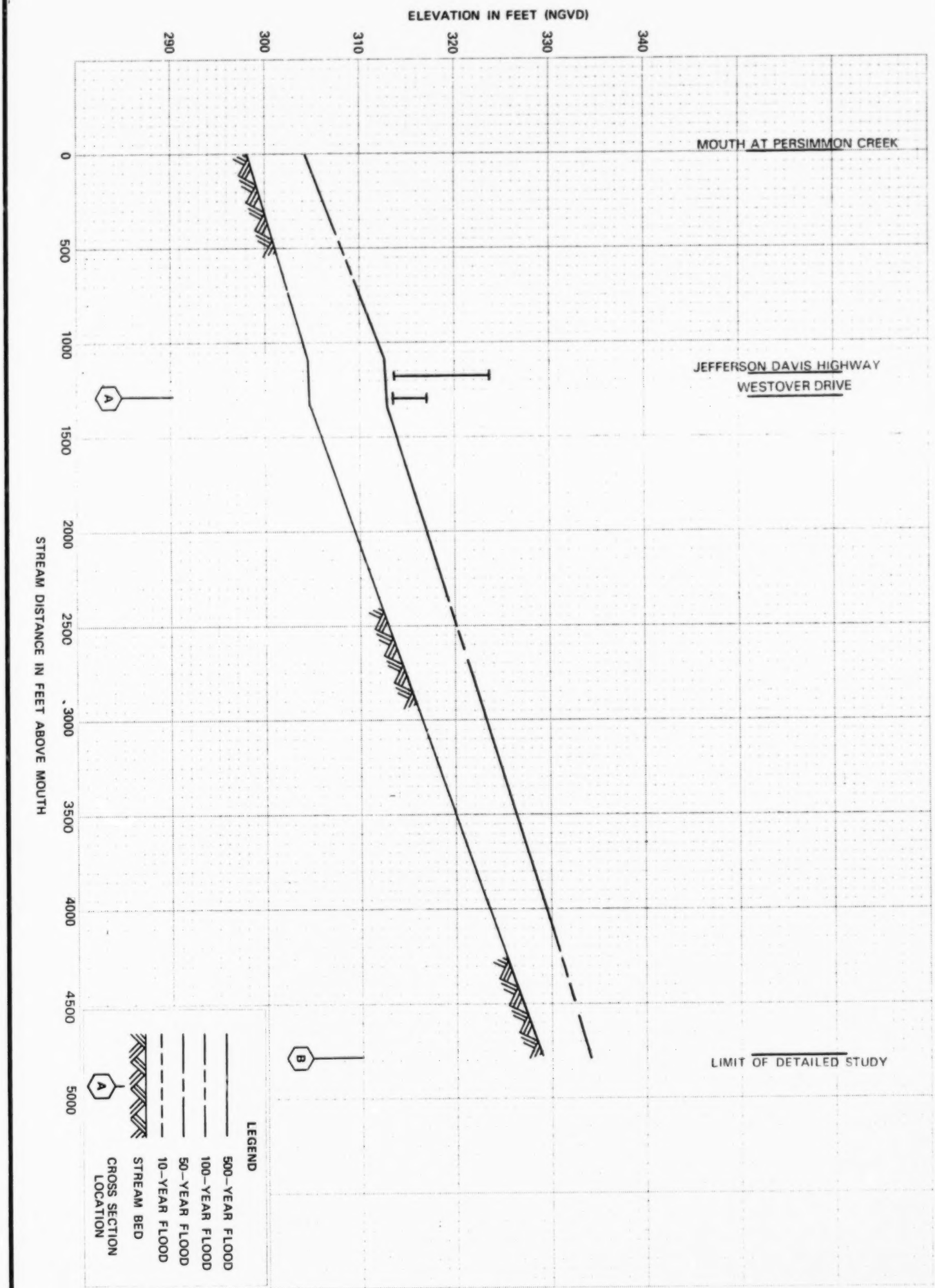
FLOOD PROFILES

BIG BUFFALO CREEK/PERSIMMON CREEK



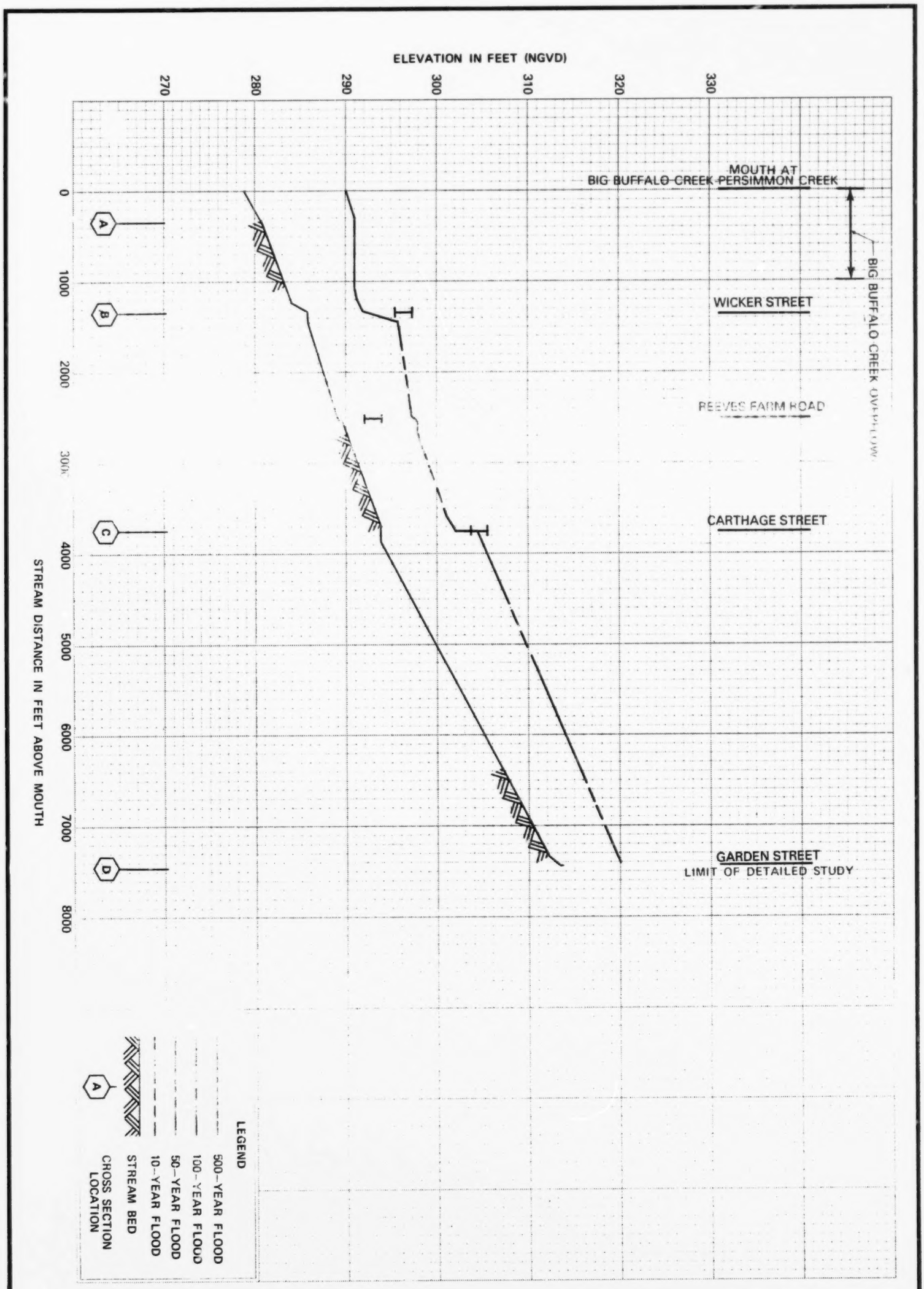
21

10P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES PERSIMMON CREEK



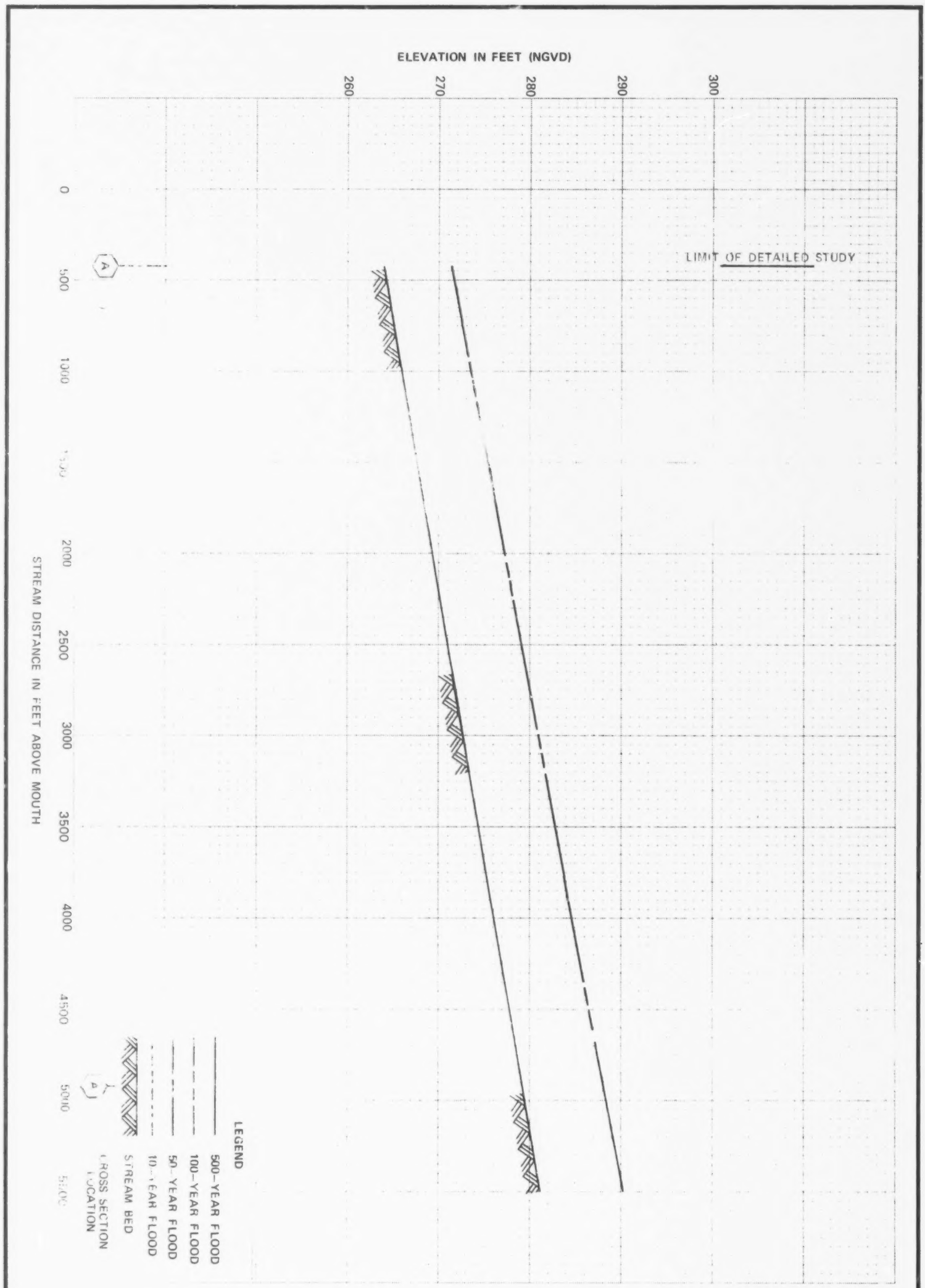
22

11P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES PERSIMMON CREEK TRIBUTARY

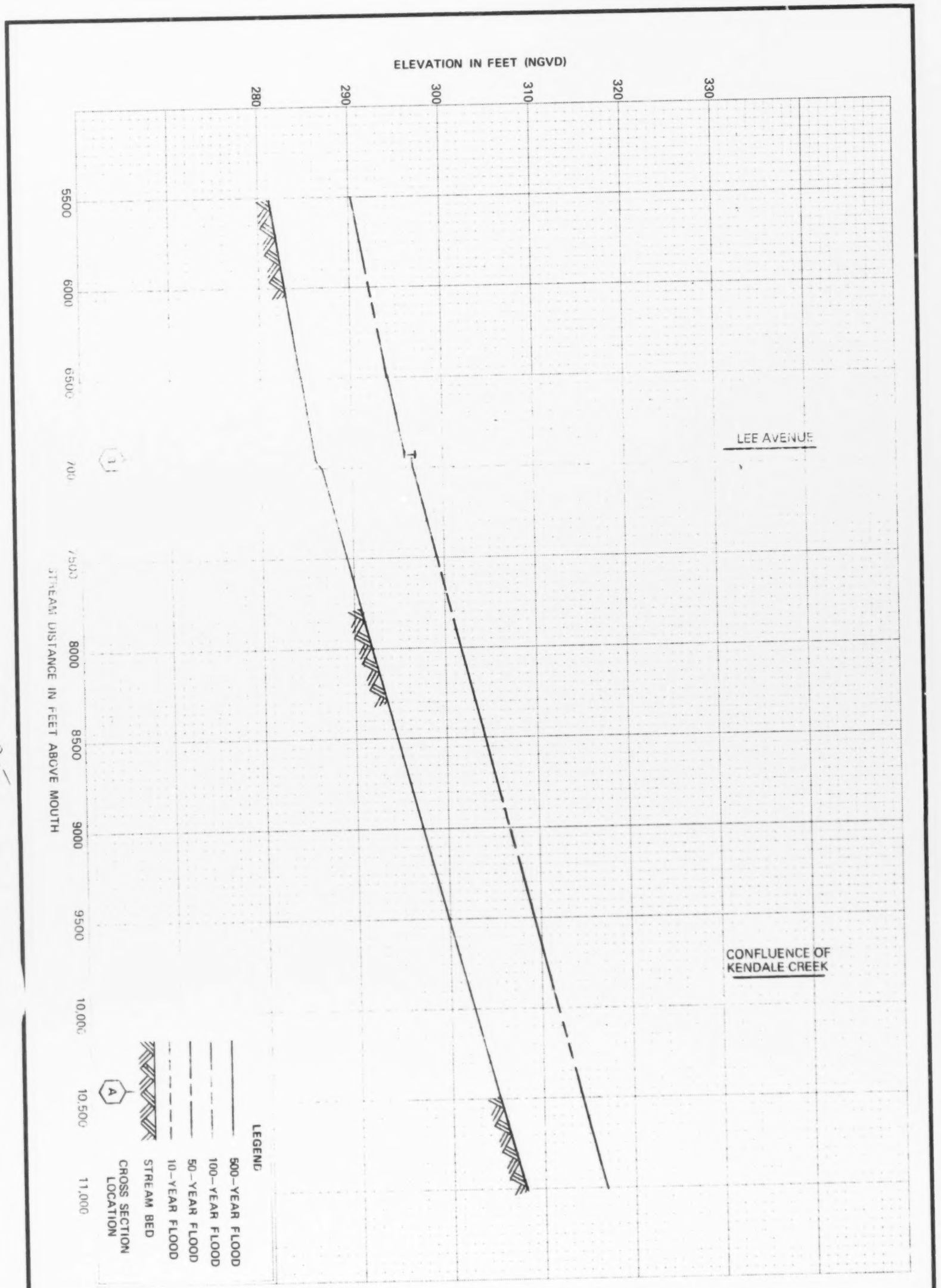


23

12P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES SKUNK CREEK

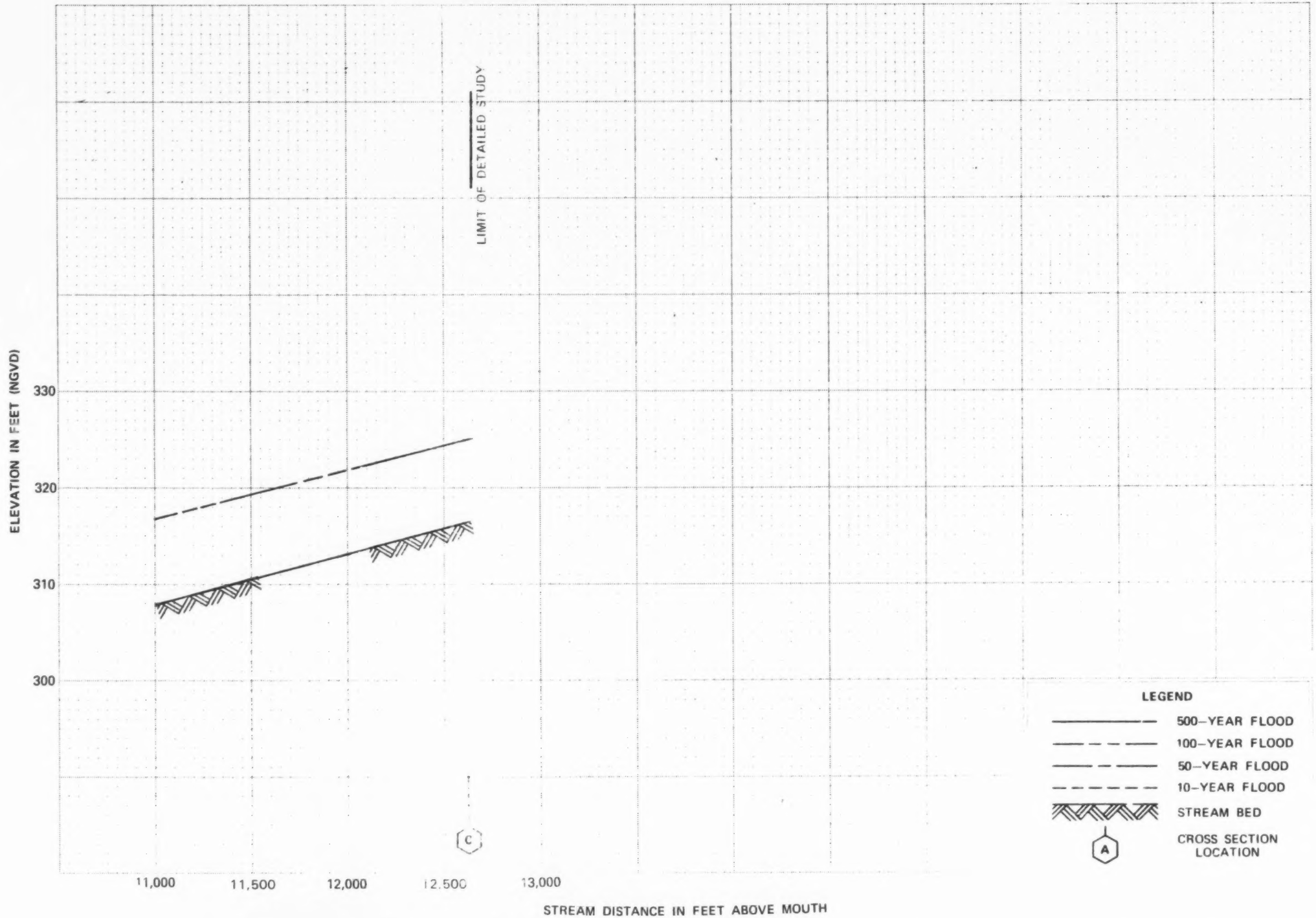


13P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES GASTERS CREEK



25

14P	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, NC AND INCORPORATED AREAS	FLOOD PROFILES GASTERS CREEK



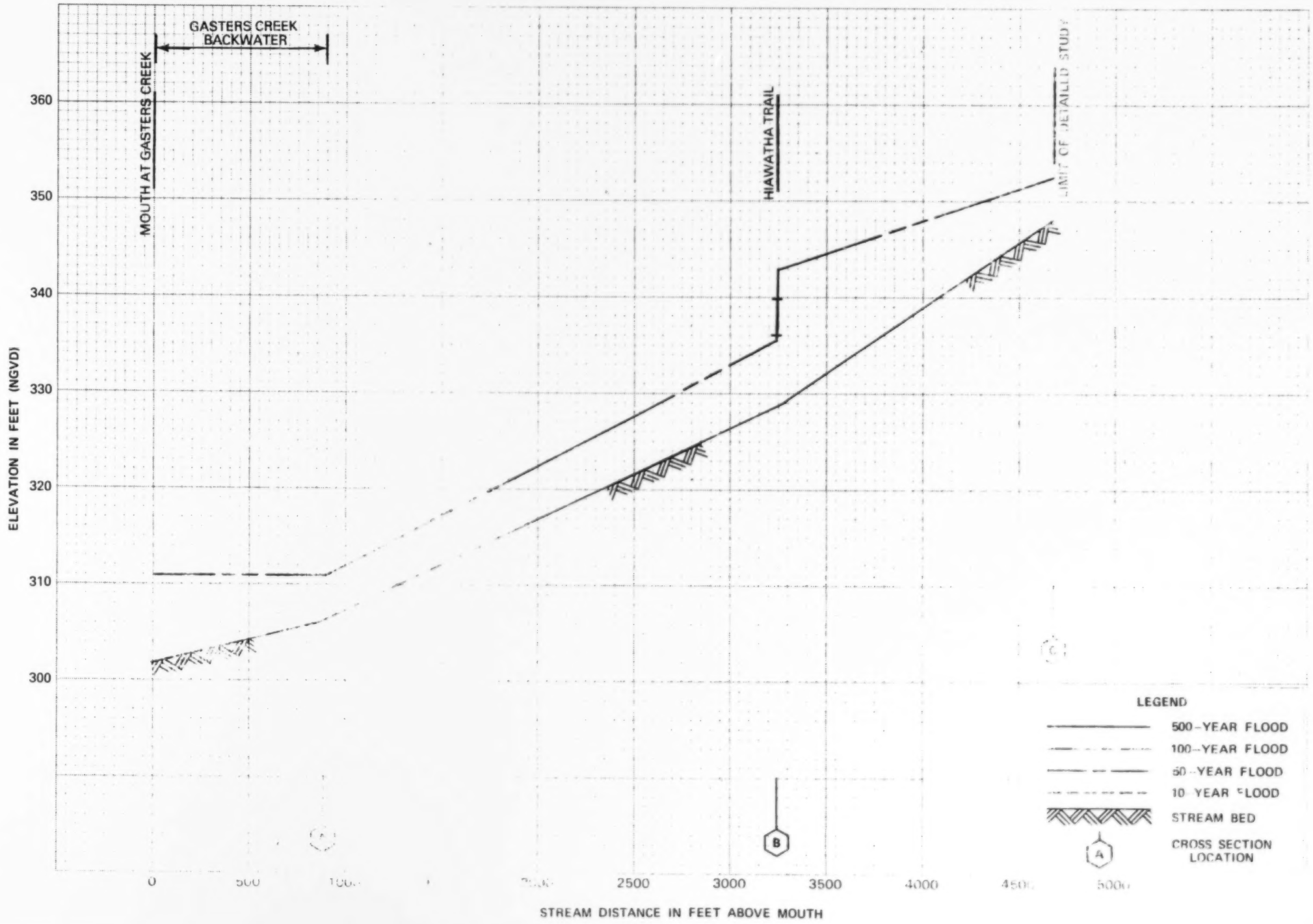
FLOOD PROFILES

GASTERS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

15P



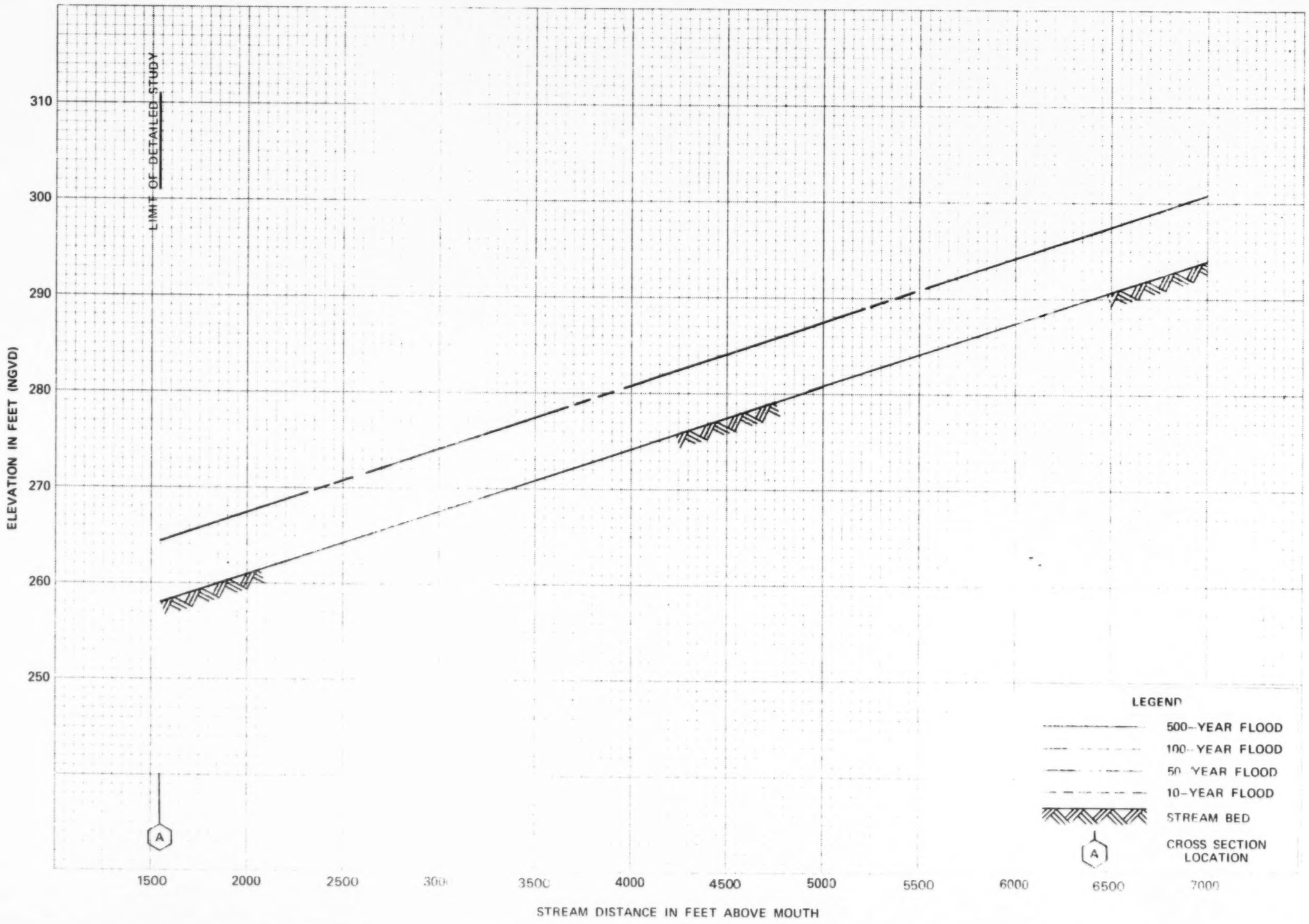
FLOOD PROFILES

KENDALE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

16P



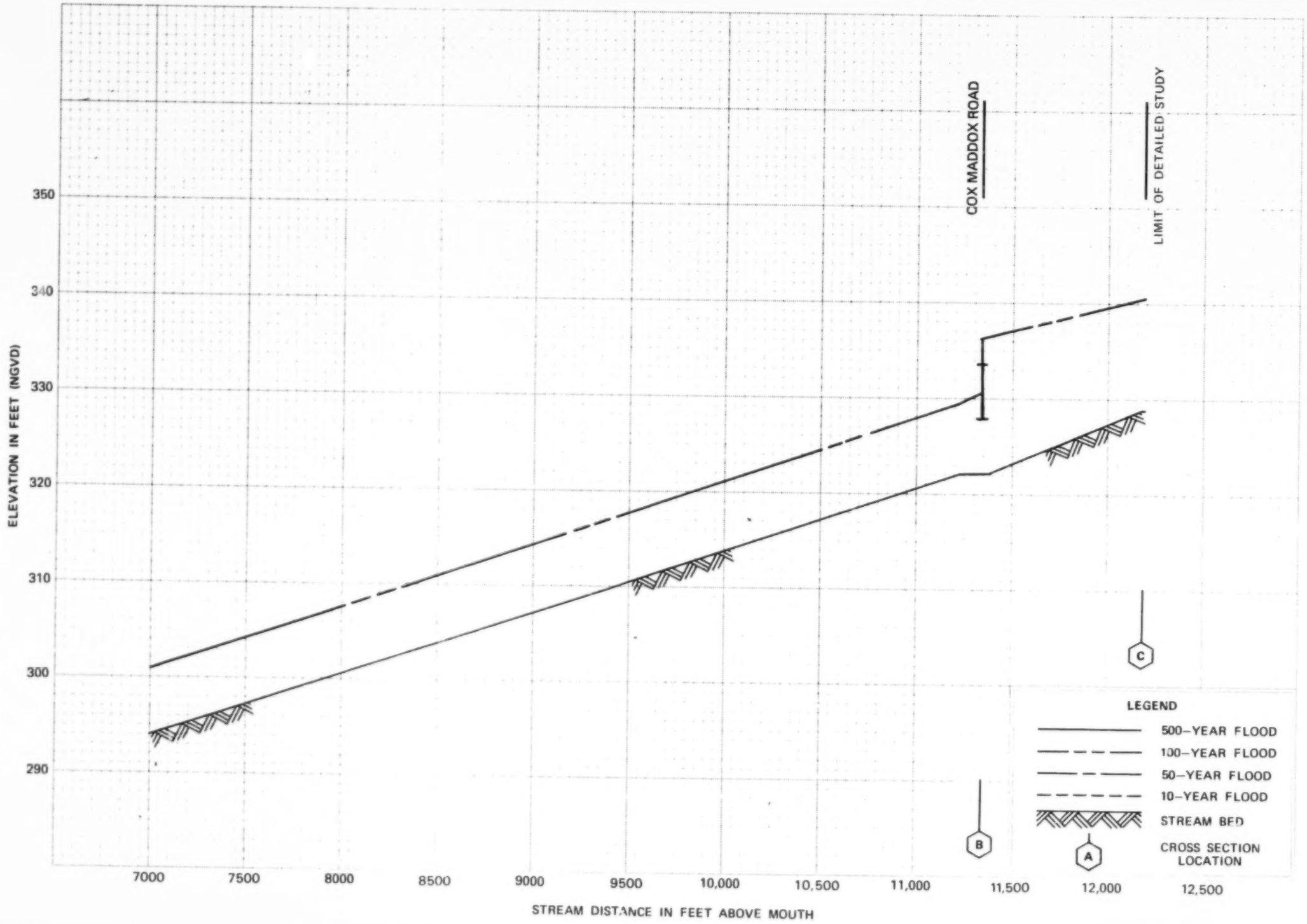
FLOOD PROFILES

CARRS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

17P



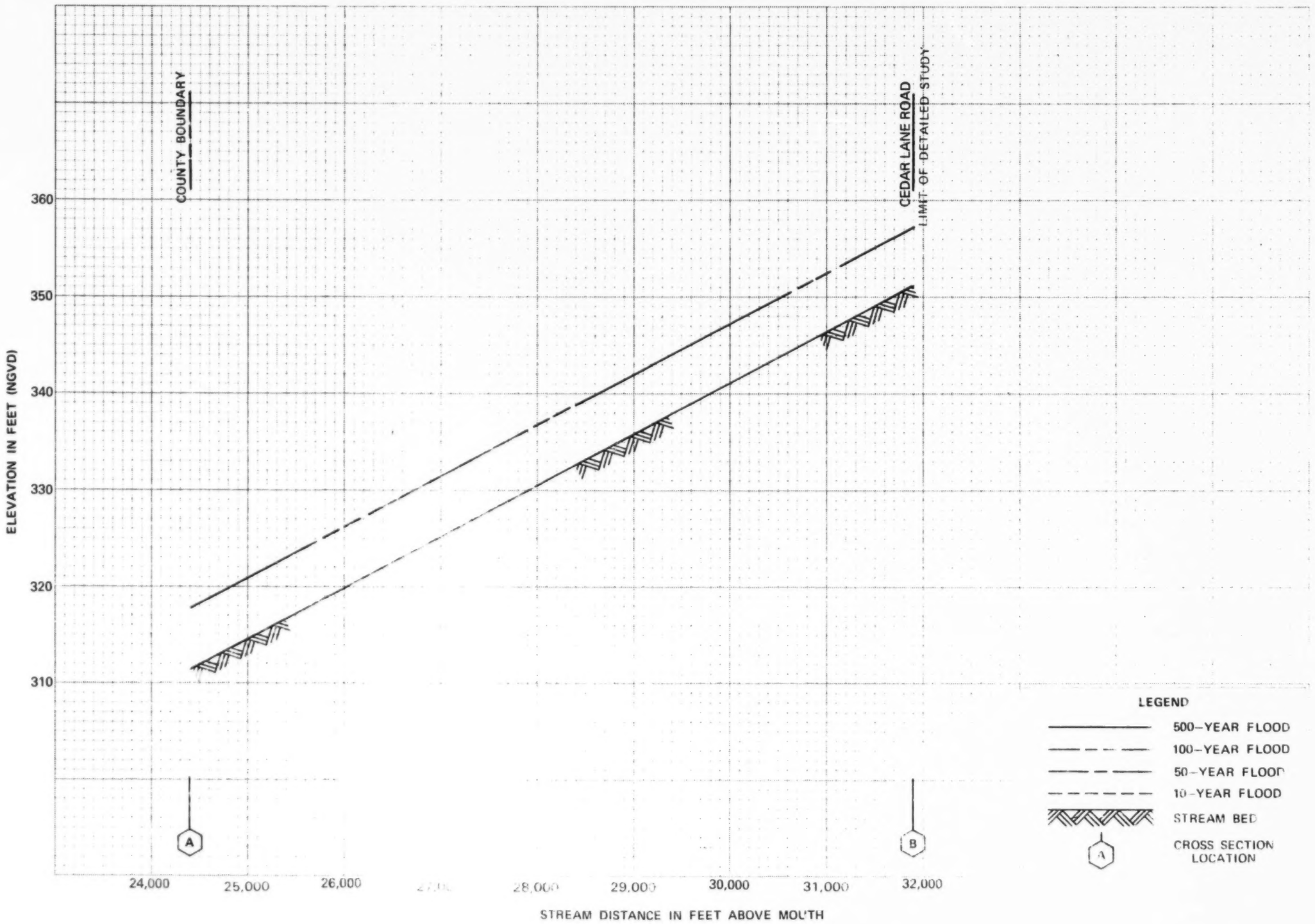
FLOOD PROFILES

CARRS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC AND INCORPORATED AREAS

18P



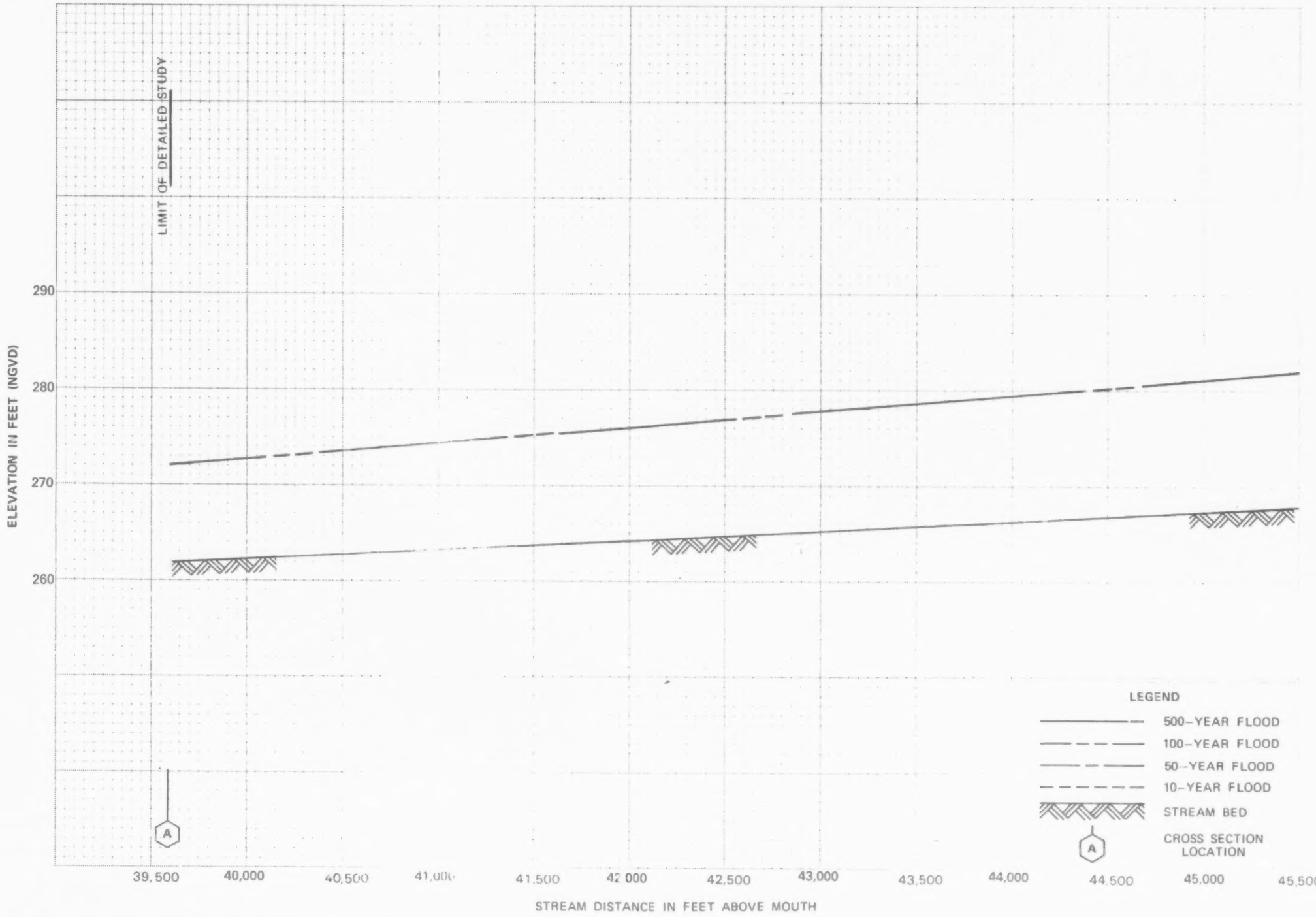
FLOOD PROFILES

LITTLE CRANE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
(NO INCORPORATED AREAS)

19P



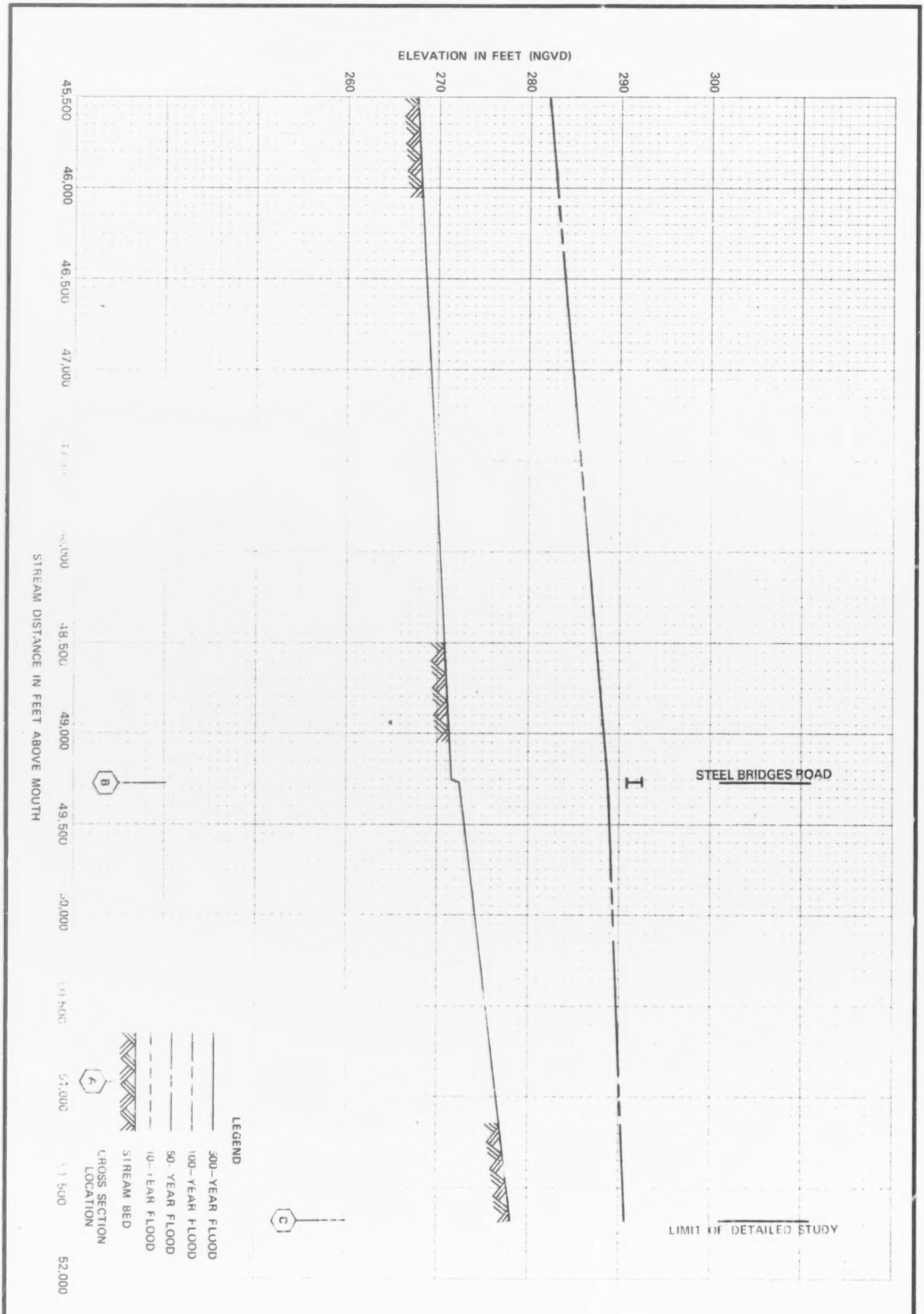
FLOOD PROFILES

POCKET CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
AND INCORPORATED AREAS

20P



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21P

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEE COUNTY, NC
INCORPORATED AREAS

FLOOD PROFILES

POCKET CREEK